ARIZONA WATER COMPANY

Docket No. W-1445A-02-0619

2002 RATE HEARING EXHIBIT NO. ___

For Test Year Ending 12/31/01

PREPARED

REBUTTAL TESTIMONY & EXHIBITS

OF

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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF ARIZONA WATER COMPANY, AN ARIZONA CORPORATION, FOR ADJUSTMENTS TO ITS RATES AND CHARGES FOR UTILITY SERVICE FURNISHED BY ITS EASTERN GROUP AND FOR CERTAIN RELATED APPROVALS.	Docket No. W-01445A-02-0619

REBUTTAL TESTIMONY OF RALPH J. KENNEDY

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I. INTRODUCTION AND PURPOSE EXTENT OF TESTIMONY

Q. WHAT IS YOUR NAME, EMPLOYER AND OCCUPATION?

A. My name is Ralph J. Kennedy. I am employed by Arizona Water Company (the "Company") as Vice President and Treasurer.

Q. ARE YOU THE SAME RALPH J. KENNEDY THAT PREVIOUSLY PROVIDED DIRECT TESTIMONY ON THIS MATTER?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS PROCEEDING?

A. The purpose of my rebuttal testimony is to respond to certain direct testimony submitted by the Arizona Corporation Commission's Utilities Division Staff ("Staff") and the Residential Utility Consumer Office ("RUCO") in this rate proceeding. Specifically, I will address the proper ratemaking treatment for the funds received by Arizona Water under the PCG settlement, address Staff's proposed rate design for the Company's Eastern Group, discuss consolidation of the Superior and Apache Junction systems, provide further consideration of the risks impacting the Company's cost of capital, discuss a revised depreciation methodology, address issues related to the Company's NP-260 Non-potable Water Tariff, and address recovery of the capital and operations and maintenance costs of required arsenic treatment facilities.

Q. HAVE YOU PREPARED ANY EXHIBITS AS PART OF YOUR PRESENTATION IN THIS PROCEEDING?

A. Yes, I have prepared the following exhibits that are attached to this testimony:

Exhibit RJK-R1 Staff's Response to AWC's Data Request No. 4.8

Exhibit RJK-R2 Capacity Multiples by Meter Size

Exhibit RJK-R3 Percent Of Use In Tier 3

II. THE PCG SETTLEMENT AND RELEASE AGREEMENT

Q. WHAT BENEFITS DID THE COMPANY AND ITS CUSTOMERS REALIZE AS A RESULT OF THE PCG AGREEMENT?

A. As described in Mr. Garfield's rebuttal testimony, the PCG Agreement conferred several benefits, the most significant of which was desperately needed additional water supply capacity to serve Miami system customers. It is extremely unlikely that the Company could have achieved this additional capacity on its own in the Miami system. For one thing, the Company was unable to acquire wells or well sites from PCG members to utilize the more productive groundwater resources they controlled. In addition, the cost of drilling wells to achieve the additional level of water supply capacity provided under the PCG Agreement in areas available to Arizona Water would have more than doubled the Miami system rate base.

The last well drilled by the Company in the Miami system was in 1998, before the PCG Agreement, at an actual cost of $317,000 dollars. When completed the capacity of this well was 145 gallons per minute ("gpm"). Within three years, the capacity had decreased to 122 gpm. The Company estimates that at least 10 wells at a cost of $500,000 each would have been required to achieve the same level of available water supply capacity that the PCG Agreement provides. As Mr. Garfield explained in his rebuttal testimony, any wells that the Company could have drilled in its CC&N would have generally experienced diminishing capacity over time.

Q. WHAT OTHER BENEFITS WERE REALIZED FROM THE PCG AGREEMENT?

A. Once agreement was reached on the annual replacement water quantity and guarantee time period, the Company agreed to accept a $1.4 million monetary payment to release all of its claims against the PCG.

Q. DO YOU BELIEVE STAFF HAS ADEQUATELY ANALYZED THE

BENEFITS OF THE PCG AGREEMENT?

A. No, Staff has essentially ignored the primary benefit of the PCG Agreement—a 600 gpm stable water supply for over 30 years. In fact, reading Staff's testimony, one would conclude that the only benefit of the PCG Agreement was a $1.4 million "windfall" to the Company. (*See, e.g.,* Direct Testimony of Ronald E. Ludders ("Ludders Direct") at 52.)

In its zeal to cut the Company's revenue requirement, Staff offers an inappropriate and one-sided adjustment to the Miami system's rate base and operating income--an immediate $1.4 million reduction in Miami's unadjusted test year rate base of $3,918,616 (a 36% instantaneous reduction) combined with an annual $50,000 amortization adjustment that will reduce the Miami system's required operating income by $50,000 each year for the next 28 years. Thus, instead of recognizing the benefits conferred on rate payers by the Company's actions, Staff proposes an enormous one-time "fine" for securing a 600 gpm water supply at no capital cost, followed by an additional annual $50,000 penalty for nearly three decades. As Mr. Garfield testified, Staff's recommendations are punitive and provide no incentive for water providers to battle polluters for the benefit of their customers. Apparently, if Staff's logic is followed to its conclusion, the Company would have been better off replacing its water supplies at great cost (assuming it even could) and letting the guilty polluters make a clean get away. This is hardly sound public policy.

Q. WHAT OTHER BENEFITS HAS STAFF IGNORED IN DEVELOPING ITS RECOMMENDATION?

A. Although we can compute the avoided cost savings to the Miami customers over the life of the PCG Agreement, it is virtually impossible to develop a quantitative value for the access right to guaranteed water supplies of 600 gpm from property owned or

controlled by the PCG. Without this, the physical facilities could become unproductive and inadequate to meet the needs of the Miami System long before the end of the PCG Agreement. Nevertheless, Staff has also ignored both the avoided cost of acquiring and operating the physical facilities and the guarantee from the PCG that the physical facilities turned over to the Company will produce 600 gpm in 2028.

Q. CAN THE VALUE OF THE BENEFITS THE COMPANY OBTAINED FOR ITS MIAMI CUSTOMERS UNDER THE PCG AGREEMENT BE MEASURED?

A. Yes. The following table compares the minimum measurable avoided cost financial benefit to the customers with the $1.4 million settlement to the Company.

	Partial Customer Benefits Over Life Of PCG Agreement					Company Benefit	
Discount Rate (a)	Depreciation Expense (b)	Required Return (c)	Gross Return (d)	Minimum Benefit (e) (b)+(d)	Power Savings (f)	Amount (g)	Percentage (h) g/(e+g)
None	$5,000,000	$7,600,000	$12,359,587	**$17,359,587**	$7,449,000	**$1,400,000**	**7.5%**
6.0%	$1,858,063	$3,760,531	$6,115,606	**$7,973,669**	$2,297,377	**$1,247,406**	**13.5%**
8.0%	$1,432,261	$3,105,776	$5,050,804	**$6,483,065**	$1,663,445	**$1,202,645**	**15.6%**
8.6%	$1,332,135	$2,942,565	$4,785,379	**$6,117,514**	$1,518,343	**$1,189,743**	**16.3%**
9.5%	$1,200,239	$2,721,039	$4,425,120	**$5,625,359**	$1,329,958	**$1,170,823**	**17.2%**
10.0%	$1,135,174	$2,608,741	$4,242,496	**$5,377,669**	$1,238,296	**$1,160,531**	**17.8%**

As discussed above, without access to PCG controlled land and drilling rights, the Company would have had to drill at least 10 wells at an average cost of $500,000 each to increase the Miami water supply by 600 gpm. The Miami customers' rates would then have included depreciation expense, a return on the capital cost and

associated income taxes if the Company invested capital in such wells. Customer rates would also have included recovery of power expense for an undetermined period of time and increased property taxes resulting from the required increase in operating revenues. Obviously, the sum total of this would have been a much larger rate increase for the Miami system than that being sought by Arizona Water in this proceeding.

I would also note that the calculated Minimum Customer Benefit, column ***(e)***, is exclusive of avoided costs for power savings and property taxes. Also excluded are the operating and capital costs for necessary replacement wells that Mr. Garfield stated are required for wells drilled in the Gila conglomerate. The $17,359,857 Minimum Customer Benefit shown in the above table, which will accumulate over the life of the PCG Agreement, includes only depreciation expense and the gross return requirement, including income taxes on the return. This compares to the $1.4 million payment to the Company, which is only 7.5%, column ***(h)***, of the sum of the Minimum Customer Benefit shown in column ***(e)*** and the Company benefit shown in column ***(g)*** above. Additional savings for other avoided costs such as property taxes and power savings would also accrue to the customers. Based on Mr. Hammon's recommended power cost adjustment, if no wells were turned over to the Company until the final 2028 deadline, the power savings as shown in column ***(f)*** of the above table would add to the minimum benefit shown in column ***(e)*** and further reduce the Company's share of the total benefit it obtained.

Since a dollar today is considered to be worth more than a dollar received in the future, it is also appropriate to adjust the cumulative comparable benefits through a present value analysis. The Company's share of the total minimum benefit, as shown in column ***(h)*** of the above table varies from only 7.5% to 17.8% when the

present value of the benefits are compared at discount rates from 6% to 10%.

The Miami customers have not borne the cost of the replacement water and will continue to enjoy that benefit until such time as the PCG turns over wells with a 600 gpm capacity to the Company and revised rates including the power cost and well maintenance expense for the new wells are authorized and become effective following a future general rate case. Because the Company has been receiving the replacement water at no cost under the PCG Agreement, the Company did not propose a pro forma increase in its test year Miami purchased power expense and objects to Mr. Hammon's proposal to include a further 2003 increment of reduced power expense. Direct Testimony of Lyndon Hammon ("Hammon Direct") at 17-18. The adjustment assumes that the PCG will not turn over any wells to the Company in 2003. October 2003 is when the final 100 gpm of replacement water capacity is due, and the PCG has every incentive to transfer wells with 600 gpm capacity to the Company to avoid the pumping costs they are incurring. Although Staff witness Mr. Hammon estimated that the minimum value of the power to pump 600 gpm is $234,000 per year (Hammon Direct at page 18, ls. 4-22), reducing the Company's power expense for the 2003 increment of "free water" based on the unknown action of another party does not satisfy the known and measurable criteria applied to pro forma adjustments to test year operating expenses and as such, Staff's proposed adjustment of $39,000 to purchased power expense should be rejected.

Q. DID THE COMPANY PROPERLY ACCOUNT FOR THE $1.4 MILLION PAYMENT BY THE PCG AGREEMENT?

A. Yes. The settlement payment was accounted for by the Company as Miscellaneous Income and appeared in both its 1998 and 1999 independently audited financial statements as well as its 1998 and 1999 Annual Reports to the Commission. There

was no special narrative description of the compensation nor was one permitted. In fact, a voluntary narrative description would have violated the confidentiality provisions of the PCG Agreement.

Q. ANY FURTHER COMMENT ON THE PCG AGREEMENT ISSUES MR. KENNEDY?

A. Yes. Rather than analyzing the full benefits of the PCG Agreement, Staff has concocted a novel and unsupportable reduction of the Company's revenue requirement. Staff states without qualification: "Since the $1,400,000 was not the investment of the shareholders a reduction to the rate base is appropriate." Ludders' Direct Testimony at.52, ls. 9-10. Staff appears to be arguing that all dollar inflows to the Company that are not the investment of the shareholders should result in a reduction to rate base, for example bond proceeds, short-term borrowings, gain on sale of assets, non-operating income from any source. Staff also appears to argue that it doesn't matter how the dollar inflows are used or whether or not they are actually invested in new plant facilities. It is difficult to grasp even the intended meaning of such broad, unqualified and unexplained statements.

Staff also recommends that the $1.4 million be treated as a Contributions in Aid of Construction ("CIAC"). However, the settlement from the PCG has none of the characteristics of CIAC. The Commission's Rules define contributions in aid of construction as: "Funds provided to the utility by the applicant under the terms of a main extension agreement and/or service connection tariff the value of which are not refundable." A.A.C. R14-2-401. Thus, the essential elements of a Contribution are: 1) funds are provided by an applicant 2) for the specific purpose of installing the necessary facilities to serve the applicant. The PCG is not an applicant for service, there is no related main extension agreement or service connection agreement and the

PCG Agreement does not obligate the Company to install facilities to provide water service to the PCG or anyone else.

Even if Staff had developed a cogent argument for its proposed accounting and rate treatment, which it certainly has not, there are insurmountable public policy and equity hurdles confronting Staff's recommendation. As Mr. Garfield stated and as quantified in the table of Customer and Company Benefit set forth above, the Company's customers received, and will continue to receive, substantial economic benefits far exceeding the present value of the settlement received by the Company. There is simply no logical or equitable basis for Staff's recommended treatment, and it should be rejected.

III. RATE DESIGN

Q HAVE YOU REVIEWED THE STAFF'S RATE DESIGN AND EVALUATED ITS THEORETICAL MERITS?

A. Yes, I have reviewed both the stated theoretical basis and the underlying support for Staff's experimental rate design as set forth in Mr. Thornton's direct testimony. I have also reviewed and evaluated the Staff's actual recommended rates as set forth in Mr. Ludders' testimony and workpapers for each Eastern Group system. My overall conclusion regarding Staff's rate design recommendations is that it is inadequately developed and lacks both depth and breadth of quantitative support. Instead, Staff relies on suppositions, assumptions, unsupported assertions and fails to acknowledge issues discussed in the very publications it relies on in making its recommendations.

Moreover, the design deviates from the Company's existing and proposed cost of service based rates without any supporting cost of service study. Mr. Thornton's cryptic half page calculations of Apache Junction's Average Incremental Cost (AIC) is not a cost of service study. Staff's deviation from cost of service rates is more than

a theoretical concern; it creates inequitable subsidies between meter sizes in each Eastern Group system. It is folly to apply experimental and untested rate design concepts to 30,000 customers over a very large area based solely on Staff's incomplete theoretical analysis.

Q. IS STAFF'S THEORETICAL ANALYSIS CONSISTENT WITH COMMISSION POLICY?

A. No. Staff fails to even acknowledge the Proposed Tiered Rate Design Policy posted on the Commission's web site, which states in part:

> Criteria for evaluating the appropriateness and/or type of tiered rate structure on a case-by-case basis shall include, but not be limited to, the following:
>
> 1. Number of service connections on the system.
> 2. Number of high usage customers on the system.
> 3. Gallons of average water usage per connection per month.
> 4. Gallons of median water usage per connection per month.
> 5. Source of supply.

Staff makes no effort to even address these factors and, as a result, the theoretical basis of the proposed rate design is poorly explained and not supported. The proposed rates are discriminatory and fail to meet cost of service standards that specifically address the unique aspects of each system. This is rather ironic given Staff's opposition to consolidation when it is proposed by the Company to moderate rate impacts on small systems because they oppose subsidies and state that rates must be cost based. Nevertheless Staff seems perfectly willing to produce and accept subsidies within systems that require the larger meter sizes to subsidize the smaller customers.

Q. PLEASE DESCRIBE SOME OF YOUR SPECIFIC CRITICISMS AND CONCERNS WITH THE THEORETICAL SUPPORT FOR THE EXPERIMENTAL RATE DESIGN CONCEPTS ADVANCED BY STAFF.

A. Staff proposes an experimental, marginal cost rate design approach for approximately 30,000 customers in all eight Eastern Group systems that has never been used in Arizona. This novel rate design approach is not widely used by the majority of United States water utilities, especially investor-owned utilities. Many of the published articles dealing with actual use involve government-owned water utilities that normally base the current year's rates on future budgeted capacity additions.

The first citation in Mr. Thornton's testimony is to an article by Mann "Marginal-Cost Pricing: Its Role in Conservation." Staff's quote includes the following sentence.

> A few water utilities have adopted seasonal or inverted-block pricing based on estimations of marginal-cost differentials by season or demand function. The scaling requirement, however, along with other factors, has limited the appeal of this rate setting approach.[1]

However, Staff does not discuss the scaling requirement or address the other factors in the quotation that limit the appeal of this approach.

Another concern raised in the article is:

> The critical step in the AIC approach is the selection of the output denominator in calculating the AIC. The cost numerator can be divided by a measure of designed capacity. The use of designed capacity may, however, underestimate AIC because there is no recognition of reserve or unused capacity. The procedure also does not recognize the magnitude of lost or unaccounted-for water.[2]

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[1] Direct Testimony of John S. Thornton ("Thornton Direct") at 3, ls. 20-24.

[2] Dr. Patrick Mann, "Marginal-Cost Pricing: Its Role in Conservation" Published in the *Journal of the American Water Works Association* and available at http://www.cepis.ops-oms.org/muwww/fulltext/repind48/marginal/marginal.html

Yet, again, Staff does not provide any explanation of how it selected its output denominator, how they dealt with reserve or unused capacity or unaccounted for water in each Eastern Group system. More importantly Staff computes one average incremental cost or AIC for the Apache Junction system and then blindly applies it to all of the Eastern Group systems despite the significant differences between Apache Junction and the remaining small and geographically diverse systems. Reserve capacity and unaccounted-for water are not uniform throughout the eight systems, nor is investment per customer, customer growth or water demand per customer. The systems are more different than they are similar.

Q. DO YOU HAVE CONCERNS ABOUT THE OTHER PUBLICATIONS STAFF APPEARS TO BE RELYING ON TO SUPPORT ITS EXPERIMENT IN RATE DESIGN?

A. Yes. Staff identifies a case study applying the marginal cost principal to setting rates for water utility service. Presumably, this indicates that Staff has read, agrees with and has generally followed the article, which makes the following statements.

- The study consisted of six tasks:

  1. develop an understanding of MMWD's (the Marin Municipal Water District) water supply-demand situation, operations and customer characteristics;
  2. review the current rate structure and identify related problems;
  3. prepare a list of rate setting objectives;
  4. review and evaluate potential alternative rate structures;
  5. formulate a rate structure that best achieves the stated rate-setting objectives; and
  6. recommend a new rate structure to the board of directors.

- Marginal capital costs were developed using the long-term capital program to estimate the incremental cost of developing additional water supplies.
- The rates proposed...were intended to eliminate existing subsidies among different customer classes and between large and small users.
- Fluctuations in revenue needs would be accommodated through the build-up and drawdown of reserves.
- With a three tier rate structure, only 3 percent of water use would be priced at the highest tier in FY1993-94. Similarly, about 13 percent of the water use would be priced at the second tier. The remaining 84 percent would be priced at the first tier rate.[3]

Staff certainly has not provided any testimony to indicate that it followed any of the procedures in this article or explained why any variations might be justified. Staff also deviated from the recommended rate approach by recommending only one uniform set of break points for all meter sizes in all eight systems where the commodity cost would increase. The MMWD design, on the other hand, recognized that there should be different break points for different size users and established three breakpoints for one system based on customer characteristics to avoid subsidies and discrimination.

Q. WHAT OTHER STATEMENTS IN STAFF'S THEORETICAL RATE DESIGN DISCUSSION MAY LEAD THE READER TO INCORRECT CONCLUSIONS?

A. First, Staff makes the following statement (Thornton Direct at 6):

> Economists would say that water is 'price inelastic.' Therefore, Staff did not make any changes to test-year bill counts in conjunction with the three tiers.

The fact that water is generally regarded as price inelastic does not mean that rate design can disregard the effect of price elasticity. Price inelastic only means that the

[3] Robert Reed and Ronald Johnson, "Developing Rates With Citizen Involvement" *Journal of the American Water Works Association*, vol. 86, no. 10 (October 1994).

percentage change in quantity is less than the related percentage change in price.

The following description of price elasticity from the NRRI manual contradicts Staff's conclusion:

> In economics, demand is viewed as the inverse relationship between price and quantity consumed. The price elasticity of demand measures the percentage change in quantity demanded in response to a percentage change in price. That is, price elasticity measures the sensitivity of quantity consumed to price changes. Estimating price elasticity is an important component of demand forecasting and revenue projection. If a rate change is anticipated, its effect on demand and revenues must also be anticipated by utilities and their regulators.[4]

The discussion goes on to give some estimates of price elasticity for water demand.

> The literature as a whole suggests that a likely range of elasticity for residential water demand is between -.20 and -.40, which is relatively price inelastic.[5]

According to Staff's response to Arizona Water's Data Request No. 4.8, Staff relied on the entire NRRI handbook "Cost Allocation And Rate Design For Water Utilities" to design its Eastern Group rates. *See* Staff Response to 4.8 attached hereto at Exhibit RJK R-1. However, this does not actually appear to be the case.

Given a single price increase of 20% the percentage change in quantity of water demanded at elasticities of -.20 and -.40 would be -4% and -8%, respectively. Staff's tiered rate design incorporates two 20% price increases and ignores the effects of price elasticity. Price really does matter as made clear by the customers from San Manuel appearing at the public comment session on June 23, 2003 who stated that

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[4] **"Cost Allocation and Rate Design for Water Utilities". Published by National Regulatory Research Institute, December 1990, page 31.**

[5] *Id.*

price increases would affect their consumption.

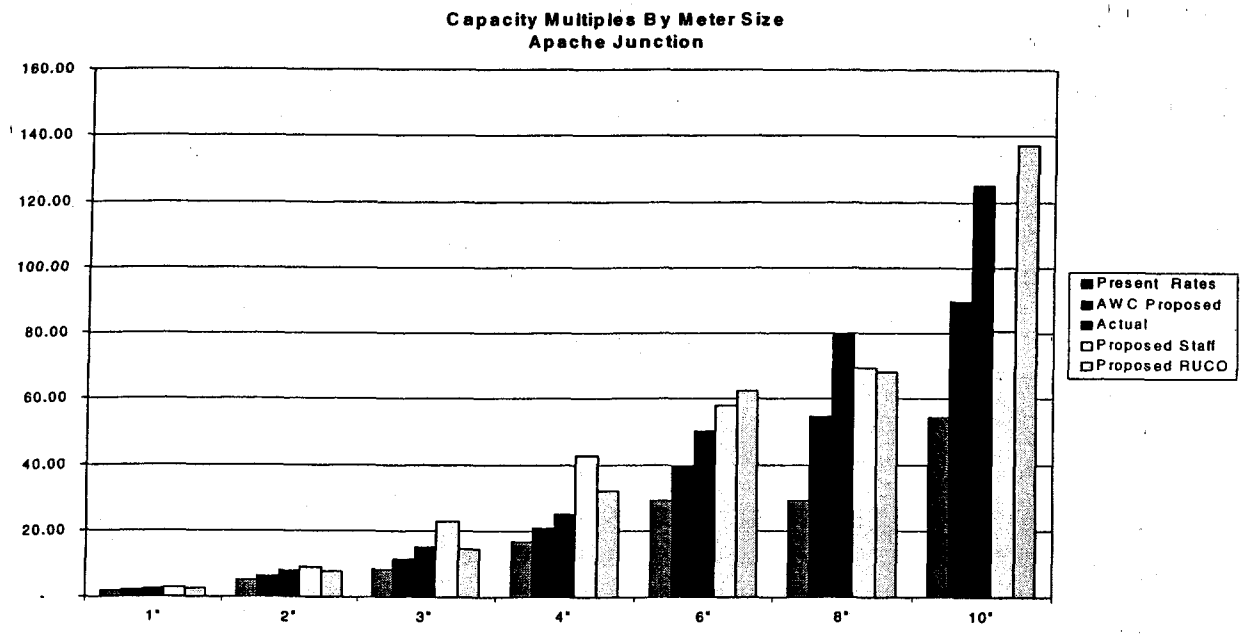
Second, to demonstrate that the Commission has previously approved inverted block rates for water utilities, Mr. Thornton cites four recent Commission Decisions. Thornton's Direct at 7. Each of those utilities has approximately 500 customers. Although these systems have something in common with the Winkleman system, the fact that they have tiered rates, some of which appear to have been requested by the utility, is not an argument for adopting experimental tiered rates for the 30,000 Eastern Group customers in eight different systems.

Q. HAVE BOTH STAFF AND RUCO DEVIATED FROM THE EXISTING COST OF SERVICE BASED RATES?

A. Yes. The existing rates, like those in the recent Northern Group Rate Case, became effective in January 1993 and were based on a cost of service study submitted by the Company. Docket No. U-1445-91-227.The actual authorized rates deviated somewhat from the pure cost based rates to moderate the impact on customers. There were two main adjustments. The recommended elimination of 1,000 gallons of free water in the minimum charge was postponed. The other change to moderate the impact on larger meter sizes was to delay full implementation of the actual meter multiples. A meter multiple scales the minimum rate for the 5/8" meter by the capacity multiple of each larger sized meter. The Company's proposed rate design, which followed the same principles as recommended and approved in the recently concluded Northern Group Phase I rate case, addressed the two moderating adjustments reflected in the existing, cost based rates. First, the 1,000 gallons of free water in the minimum charge was eliminated. Second, following the principle of gradualism in rate design, each system's existing meter multiples were moved half way toward the actual meter multiples. The existing cost based meter multiples, the Company's recommended

multiple, the actual capacity multiple, Staff's proposed multiple and RUCO's proposed multiple for each meter size in each system are illustrated on Exhibit RJK R-2.The first chart of this exhibit, for the Apache Junction system, is shown below.

The first three bars for each meter size (existing cost based meter multiples, Arizona Water's recommended multiple, the actual capacity multiple) demonstrate the logical, consistent and gradual movement of the existing meter multiples in the



Company's proposed rate design toward the actual capacity multiple in the third bar. The illogical, haphazard and erratic changes proposed by Staff and RUCO's proposed rate designs is confirmed by looking at their meter multiples, shown as the fourth and fifth bar respectively in the above chart and all the Charts of Exhibit RJK R-2. Sometimes they exceed the actual capacity multiplier (the third bar) and at other times they are below it.

Q. WHAT DOES YOUR EVALUATION OF THE STAFF'S EXPERIMENTAL RATE DESIGN SHOW?

A. There is a one overriding, fundamental and ultimately fatal flaw in Staff's proposed

rates: discrimination among meter sizes to favor the smaller size meters with lower use. In each of the eight Eastern Group systems, Staff is proposing a disproportionate increase in the larger size meters. This discrimination in Staff's proposed rate design comes about in two ways. First, by increasing the meter multiples beyond the actual capacity multiple (the third of the five bars shown on Exhibit RJK R-2 for each system and meter size. As the exhibit shows, this discrimination also is present in RUCO's rate design proposal. Second, Staff goes on to discriminate against the larger size meters by recommending only a single set of break points (the consumption levels above which a higher price commodity tier becomes effective) for all meter sizes and all eight systems. The percent of commodity use that is priced at the highest Tier 3 level for each Apache Junction meter size is presented on Exhibit RJK R-3 to illustrate the problem. This exhibit shows that the 5/8-inch meter category consumption does not go beyond the second 50,000 gallon break point. However, each larger size meter has an increasing percentage of consumption above the third 100,000 gallon break point that is subject to the highest Tier 3 commodity rates. The upward sloping trend line is further graphical evidence of the benefit given to the 5/8-inch meter customers to the detriment of customers' with the larger size meters.

The linear trend of percentage increases across all meter sizes confirms the clearly discriminatory effect of Staff's proposed experimental rate design on the Apache Junction customers. Since the same tiered rate design, with a single, uniform set of break points is applied to each Eastern Group system, the resulting rates for the other systems will show a similar trend to the Apache Junction trend shown on Exhibit RJK R-3.

In short, Staff's proposed experimental rate design is a bad experiment that should not be imposed on 30,000 Eastern Group customers. It should be sent back to the drawing board for a complete overhaul and then tried out a smaller systems until its

board for a complete overhaul and then tried out a smaller systems until its results are predictable. It is shear folly to recommend such a radical and untested rate design concept for 30,000 customers. In the future each system's unique characteristics must be considered and utilized to design fair and non-discriminatory rates. There is no easy solution to developing reasonable and non-discriminatory rates of the type Staff is proposing. It requires much more work, analysis, evaluation and explanation than Staff has devoted to the task in this proceeding. Staff's rate design and RUCO's should be rejected.

IV. APACHE JUNCTION AND SUPERIOR SYSTEM CONSOLIDATION

Q. HAS THE COMPANY REVIEWED THE STAFF'S RECOMMENDATION CONCERNING CONSOLIDATION OF THE APACHE JUNCTION AND SUPERIOR SYSTEMS?

A. Yes, Mr. Whitehead and I have reviewed and will comment on Staff's recommendation related to the consolidation of the Apache Junction and Superior systems. Mr. Hammon bases his opposition to rate consolidation at this time on two reasons. The first reason is that Mr. Hammon believes that a detailed cost of service study would need to be presented to address alleged inequalities. The second reason for Mr. Hammon's opposition is that the systems are not physically interconnected at this time. Mr. Hammon believes that a detailed cost of service study would need to be presented to address alleged inequalities. Hammon Direct at 3.

Q. DOES THE COMPANY AGREE?

A. No. The Company disagrees with Mr. Hammon that a detailed cost of service study is needed to address alleged inequalities. It is interesting that Mr. Hammon doesn't believe that a detailed cost of service study is required for Staff's proposed experimental rate design but believes it is required for consolidation. The Company's

initial step toward consolidation would merely unify the monthly minimum rates that would be charged. Apache Junction's and Superior's billing districts would be maintained and customers would be billed at the rates authorized in this proceeding, which would include a unique commodity charge for each system. Direct Testimony of Ralph J. Kennedy at 11. Then, in a subsequent Eastern Group rate proceeding, the Company would propose a common commodity charge for all Apache Junction and Superior customers, the second step of the proposed rate consolidation.

Mr. Hammon expressed a concern over consolidation since there was no physical interconnection. Today's Staff may think this is a requirement for consolidation but it runs counter to over thirty-five years of Commission decisions on the Company's applications that approved rate consolidation without requiring a physical interconnection. Physical interconnection was never a necessary condition for previous Company rate consolidations and it shouldn't be now. It is wrong to elevate interconnection above so many other important considerations.

Physical interconnection, however, will be a fact before the next Eastern Group rate case is filed and rate consolidation should be positively addressed now to reduce the overall impact on customers in the next Eastern Group general rate case. Two gradual steps are preferable to one large disruptive step in the next rate case after interconnection. has been completed. As Mr. Whitehead testified there is a timetable for interconnecting these systems. On December 27, 2001, the Company filed an application with the Commission requesting approval of an extension of its existing CC&N to include additional properties in Pinal County, the area that would physically interconnect the two systems. *See* Docket No. W-01445A-01-1012. A Staff Report in the referenced docket was issued in May 2003 and a hearing was conducted on July 24, 2003. Staff recommended approval of the application for the extension of

Arizona Water's CC&N subject to three compliance conditions: 1) Company is required to charge its existing Apache Junction rates and charges in the proposed extension area; 2) Company is required to file a Curtailment Tariff and report within 30 days of the effective date of any decision in this matter (the CC&N matter); and 3) Company is required to file a developer's Certificate of Assured Water Supply related to the proposed extension area within 365 days of the effective date of the decision in this matter (CC&N matter).

If the application is approved and the CC&N extended, the Apache Junction and Superior systems will then be physically interconnected. At that point, all indications are that Apache Junction and Superior will be able to share water supplies providing additional reliability and CAP water to the Superior customer base and providing a larger base of customers to the Apache Junction system to support required facility additions such as arsenic treatment facilities and new wells. As such, consolidation would be beneficial to both Superior and Apache Junction customers and should be approved at this time.

Q. MR. WHITEHEAD HAS TESTIFIED THAT APACHE JUNCTION AND SUPERIOR WILL BE INTERCONNECTED WITHIN TWO YEARS. WHAT HAPPEN IF THESE SYSTEMS ARE NOT COMBINED FOR RATE PURPOSES NOW IN THE TWO STEP PROCEDURE RECOMMENDED BY THE COMPANY?

A. Based on the Company's original request Apache Junction revenues would have to increase 16.7%, on a stand-alone basis, and Superior's would have to increase 71.4%. These percentages are based on the current revenue requirements for each system. They do not include the further impact of arsenic treatment facilities and their annual operating cost. The Superior system's arsenic treatment facilities will have a

construction cost of $1,682,813 which is 63% of Superior's original cost rate base of $2,673,576 as proposed by the Company (Schedule B-1, page 2, line 8). the Superior system will also incur additional annual arsenic treatment Operation and Maintenance expenses of $182,374 based on evidence submitted by the Company in the Northern Group Phase II ACRM proceeding (Exhibit RJK2-4). Since these systems will be interconnected before the next general rate application, beginning the eventual rate consolidation now, in the two step procedure the Company recommends, offers at least three distinct advantages. First, by consolidating the minimums now and the commodity rates in the next proceeding, the required revenue increase for Superior can be reduced from 71.4% to 8.9%. This is achieved with less than a 6% additional increase in Apache Junction's revenue requirement from 16.7% to 22.2%. Second, a larger combined system will moderate the arsenic impacts on the already overburdened Superior customers. Finally, the Company's two-step-proposal would move the rates of each system closer together now rather than driving the existing stand alone rates even further apart as Staff and RUCO recommend. The Company's proposed gradual approach will simplify and minimize both the consolidation impact in the next rate proceeding and the impact of arsenic treatment facilities on the Superior customers.

V. COST OF CAPITAL RISKS

Q. DO YOU AGREE WITH STAFF REGARDING ADDITIONAL RISKS ASSOCIATED WITH PLACEMENT OF BONDS IN THE CAPITAL MARKETS?

A. No. I do not. *See* Direct Testimony of Joel M. Reiker ("Reiker Direct") at page 55, ls. 16-24. Like much of Mr. Reiker's testimony, the Company disagrees with Staff's general approach as well as its conclusions. Dr. Zepp will elaborate in far more detail

in his rebuttal testimony, as supplemented by my testimony.

Q. HAS STAFF PROPERLY ACCOUNTED FOR THE COMPANY'S EXPERIENCE AND DIFFICULTY IN PLACING ITS SERIES K BOND ISSUE?

A. No, Mr. Reiker continues to ignore the Company's experience before it was finally able to issue its Series K bonds. In dismissing Dr. Zepp's claim that Arizona Water faces additional risks in placing future bond issues, Mr. Reiker avoids making the necessary cost of capital adjustments to address this additional risk. *See* Reiker Direct at pages 55-56, ls. 16-24, 1-5.

Q. WHAT EMPIRICAL EVIDENCE CAN YOU CITE REGARDING THE MARKET FOR THE COMPANY'S BONDS?

A. Unlike prior bond solicitations to insurance companies, not one of the potential buyers even responded to our September 2000 request for bids. By comparison, in 1990, the Company was able to choose from ten alternative bids within two weeks of issuing its request and received a binding purchase commitment in less than five weeks.

Q. HOW DO YOU EXPLAIN THE LACK OF RESPONSES TO THE COMPANY'S SEPTEMBER 2000 REQUEST FOR BIDS?

A. I specifically contacted a number of potential purchasers to determine why they had not responded to our solicitation. The directors of private placement with whom I spoke told me that $20 million to $25 million was the minimum issue they would consider, preferring issues in the $50 to $100 million range. They also expressed a preference to acquire larger, more liquid issues for their portfolio rather than several smaller, lesser-known issues as their costs of due diligence, accounting and administration do not vary significantly for issues between $10 and $100 million.

Q. HOW IS THE CURRENT MARKET FOR THE COMPANY'S BONDS

DIFFERENT FROM THE 1990 MARKET?

A. The market for the Company's bonds has undergone fundamental changes and now consists of fewer but larger companies with more sizeable investment portfolios. A number of the companies we formerly did business with have merged or been acquired, increasing the size of the remaining entities. Many of the larger, leaner, more sophisticated entities have an appetite for much larger bond issues. Their financial staffs have been reduced and their portfolios combined. For example, First Colony Life Insurance Company purchased our entire $6 million Series J Bond issue in 1990, although we also had less competitive bids for various portions of that issue. General Electric Company has since acquired First Colony. Occidental Insurance Company and Transamerica Insurance Company, former bidders and bondholders, are now Aegon USA Investment Management Inc. Indianapolis Life Insurance Company, a former bondholder, is now AmerUS Capital Management. The Franklin Life Insurance Company, another former bondholder and bidder, is now American General Investment Management.

Q. WHAT STEPS DID THE COMPANY TAKE WHEN IT REALIZED THAT IT WAS FACING A DIFFERENT MARKET FOR ITS BONDS?

A. After the failure of the first September 2000 bond solicitation, two potential purchasers with large investment portfolios that were not on the initial request for bids list were identified in November and December of 2000. These large potential purchasers were willing to negotiate buying the Company's Series K issue but stated up front that they would require a "liquidity premium." Without any other interest in our bonds, the Company began negotiations with both entities. In subsequent negotiations with Matthew Armas of General Electric Financial Assurance and Mr. Ben Vance of Provident Investment Management, the potential purchasers added a

"liquidity premium."

Q. DO YOU KNOW THE SPECIFIC REASONS WHY THESE LARGE, SOPHISTICATED INVESTORS REQUIRED A "LIQUIDITY PREMIUM"?

A. Yes. I specifically inquired as to why they demanded a "liquidity premium." They expressed the following concerns about the Company's Series K issue:

1. The size of our proposed issue.
2. The small size of Arizona Water Company.
3. The small number and value of other outstanding issues.
4. The low number of holders of outstanding issues.

These potential purchasers concluded that because of these factors, selling or trading our Series K issue would be more difficult than other issues in their portfolios. In fact, General Electric finally concluded it wasn't interested in our bonds even with a "liquidity premium." Actual investors in the Company's common stock are likely to have the same concerns.

Q. WHAT HAPPENED WITH THE PROVIDENT NEGOTIATIONS?

A. Before accepting Provident's terms, the Company learned that Pacific Mutual had received approximately $15 to $20 million of new long-term money that it wanted to invest for thirty years. I immediately flew to California and met with Pacific Mutual's Director of Private Placements. Fortuitously, their new requirements happened to dovetail almost exactly with the Company's needs. Less than two weeks after learning of their new requirements, we were able to agree on significantly better terms for the Series K issue than Provident was demanding.

Overall, however, it took the Company 141 days to obtain a purchase commitment for its Series K bond issue as compared to only 34 days for its Series J bond issue. Although the Series K issue was 2 ½ times larger than the Series J issue,

it was still too small for most of the now larger potential buyers.

Q. ARE THERE OTHER COMPANY-SPECIFIC REQUIREMENTS THAT IMPACT THE RISK FACTORS THAT SHOULD BE REFLECTED IN THE COMPANY'S COST OF CAPITAL?

A. Yes, particularly the costs of constructing and operating the required arsenic treatment facilities. By January 23, 2006, the Company must design, construct and operate arsenic treatment facilities to comply with the revised arsenic maximum contaminant level ("MCL") standard recently adopted by the United States Environmental Protection Agency ("EPA"). The arsenic treatment facilities must have a combined total treatment capacity of 60.65 million gallons per day. The Company's total arsenic treatment capital costs are estimated to be $30 million. By 2006 at the latest, annual arsenic treatment O&M expenses will have increased to $5.3 million annually. Given the limited time frame between now and the EPA's January 23, 2006 deadline and the task facing the Company to finance an additional $30 million and construct as many as fifty arsenic MCL facilities company-wide, the deadline will not be met if earnings or cash flow during this period become inadequate. Even if an ACRM that follows the Staff and Company's recommendation in the Northern Group's Phase II proceeding is adopted for both the Northern Group in that proceeding and then also for the Eastern Group in this proceeding, it will only pertain to completed, in-service arsenic treatment facilities. Although the Western Group accounts for 46% of the arsenic costs, due to the time it will take to complete a rate case there will be no ACRM to provide partial relief for the Western Group. The risk of obtaining construction financing and dealing with at least the first 12 months of annual arsenic O&M expenses for each facility will continue to stress the Company's earnings and ability to finance the required facilities.

The Company is currently awaiting a Commission decision on its request in Phase II of the Northern Group's rate case for an Arsenic Cost Recovery Mechanism ("ACRM"). In that proceeding, the Company presented evidence that, if the ACRM as recommended by the Company was approved, 86% of the revenue requirements for Company-wide arsenic treatment capital and operating costs would still be excluded from the adjustment mechanism (the revenue requirements for the capital and O&M arsenic treatment costs for the Eastern and Western Groups in the following table). If an ACRM is approved for both the Northern and Eastern Groups 46% of the total Company revenue requirements for the capital and O&M arsenic treatment costs will still be excluded from the adjustment mechanism. There is not sufficient lead time to complete a general rate case for the Western Group and put an ACRM into effect. The following table summarizes the arsenic treatment capital costs anticipated for Arizona Water Company.

ARSENIC TREATMENT CAPITAL COSTS BY GROUP

	Dollars	Percent
Northern Group	**$ 3,950,449**	**13.4%**
Eastern Group	**12,052,993**	**40.8%**
Western Group	**13,555,971**	**45.9%**
Total Company	**$ 29,559,412**	**100.0%**

The arsenic treatment O&M revenue requirements are at least equal to the arsenic treatment capital revenue requirements.

If an ACRM comparable to the recommendation by the Company in the Northern Group Phase II is authorized for the Eastern Group as requested in this docket, the annual revenue requirement for approximately $14 million of capital costs for the Western Group will still be excluded from an adjustment procedure along with

the related and approximately equal arsenic treatment O&M costs. Since the proposed Northern Group ACRM deals with completed, in-service arsenic treatment facilities and actual historic arsenic treatment O&M., the Company must still somehow finance the construction of arsenic treatment facilities and pay to operate them. Even with the recommended but limited ACRM, the Company faces unique arsenic risks that will not be experienced by the companies in the Staff's comparable entities and the cost of capital must be adjusted to reflect these unique additional risks.

Q. WHAT OVERALL WEIGHTED COST OF CAPITAL ARE YOU RECOMMENDING?

A. I am not recommending a revised overall weighted cost of capital at this time. I will make such a recommendation in my rejoinder testimony if necessary.

IV. DEPRECIATION METHODOLOGY

Q. STAFF RECOMMENDS ADOPTION OF NEW COMPONENT RATES APPLICABLE TO ALL OF ARIZONA WATER'S EIGHTEEN SYSTEMS. DOES THE COMPANY AGREE WITH THIS RECOMMENDATION?

A. The Company is not opposed to the new component depreciation rates set forth on Exhibit E to Mr. Hammon's direct testimony. Application of the new component rates in the Eastern Group can begin upon issuance of a decision in this proceeding. However, the application of the new component rates in the Northern and Western Groups, on the other hand, should not occur until the completion of the Northern and Western Groups' next general rate case in which the associated increase or decrease in expense can be incorporated into the appropriate group's rates.

V. NP-260 CAP TARIFF

Q. STAFF IS RECOMMENDING MODIFICATIONS TO THE EXISTING NP-

260 TARIFF. DOES THE COMPANY AGREE WITH THE PROPOSED CHANGES?

A. The NP-260 Non-Potable Central Arizona Project Water Tariff ("NP-260 tariff") was designed to pass through to the non-potable customers all of the costs involved in providing non-potable water service plus amounts for administration so as to be as income neutral as possible while avoiding passing costs onto the potable customers. The NP-260 tariff, as designed, places all of the applicable costs of service on the appropriate customers while encouraging the conservation of groundwater. The changes being proposed by Staff may seem trivial on their face, but maintaining the proper split of all applicable non-potable costs is fundamental to the Company's position on its NP-260 tariff. The Company agrees with Staff's proposal to eliminate the depreciation expense component from the NP-260 tariff. Hammon Direct at 16.

Mr. Hammon is also recommending a revision to the fixed monthly meter charge (*id.*), which was based upon the monthly minimum charge applicable to customers having comparable meter sizes. The rationale was that if the cost of service for a comparable sized meter dictated a monthly minimum of X dollars, then the same monthly minimum should be charged to the non-potable water user. The Company agrees with this concept and believes that the existing tariff language in item 2 in the **MONTHLY BILL** section already does this. Item 2 states: "A meter change based on the applicable monthly minimum charge by meter size as set forth in each systems General Service tariff schedule." The existing language is sufficient to adjust the meter charges for the NP-260 customers to the same revised amount as the General Service customers' meter charge. The monthly minimum charges that are approved as a result of a decision in this proceeding will become the "applicable monthly minimum charge..." when the Company files new General Service tariffs.

Mr. Hammon is also recommending revision to the administrative charges to be representative of the Company's actual administration costs. *Id.* The Company believes that the estimated percentages in the current tariff are sufficiently representative and should be continued. Finally, in addition to the foregoing tariff revisions, Mr. Hammon is recommending revised terms and conditions of service to place a greater burden on the Company on the operation and protection of the non-potable service facilities, which have not been defined. *Id.* at 17. The decision adopted in the SLV Properties complaint concluded that the Company properly charged maintenance fees and related charges to the customer in that proceeding. Decision No. 65755 (March 20, 2003) at 8, ls. 21-23. Staff's recommendation would improperly shift this responsibility to the Company and the future costs to the potable customers and therefore should not be adopted. In summary, except for eliminating the depreciation component of the NP-260 tariff, the remainder of Mr. Hammon's proposed changes are not necessary and should be rejected.

VI. RECOVERY OF ARSENIC TREATMENT COSTS

Q. STAFF'S RECOMMENDATION FOR COST RECOVERY OF CAPITAL AND OPERATING COSTS FOR ARSENIC TREATMENT WILL LIKELY BE BASED UPON THE FINAL ORDER IN DOCKET NO. W-01445A-00-0962. DOES THE COMPANY AGREE WITH THIS STATEMENT?

A. Although the Company's approach to the Northern Group procedure has been to propose an ACRM that could be used as a template for many water utilities, there will be some issues that will be unique to each of the Company's three groups. As a result of the unique issues, there may be minor differences adopted in the Eastern Group's ACRM that may not be a part of the Northern Group's. Because of this, the decision in this proceeding will have to address the Company's request for an ACRM for the

Eastern Group. Overall, however, I expect they will be essentially the same. Both the Northern Group and the Eastern Group as well as other water utilities will benefit from the time and expense the Company and Staff invested into developing an ACRM. For this reason the Company is proposing to allocate the Northern Group Phase II ACRM rate case expenses to the two groups that will be able to adopt and benefit from the ACRM, the Northern and Eastern Groups.

Q. PLEASE SUMMARIZE THE STATUS OF THE PHASE II PROCEEDINGS DEALING WITH ARSENIC TREATMENT COST RECOVERY?

A. Public hearings were held in October 2002 on the Company's request for an ACRM and the Company's proposed rate consolidation. A Recommended Opinion and Order was rendered on April 8, 2003 and considered by the Commission on April 22, 2003. At the Commission's Open Meeting of April 22, 2003, it was determined that additional evidence was needed to make a properly informed decision. Settlement discussions were conducted, additional testimony was filed on June 16, 2003, and subsequent hearings were held on June 26, 2003. Briefs will have been filed before the hearing commences in this proceeding. A new recommended order will then be issued.

Q. HOW DOES THE COMPANY ENVISION THE INCLUSION OF AN ACRM IN THIS PROCEEDING?

A. Yes. The Commission should take Administrative Notice of Phase II of the Northern Group's rate case proceeding when the hearing commences in this docket. The decision in this proceeding can adopt an ACRM comparable to the ACRM authorized for the Northern Group. The only nuance will be that the Northern Group decision will address rate consolidation for the Sedona and Rimrock systems, which will not be applicable in this proceeding. Instead, a decision on consolidating the Apache

Junction and Superior systems will be addressed as a part of this proceeding and the Eastern Group ACRM can be modified to reflect such decision.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY IN THIS MATTER?

A. Yes, except to add that the Company does not waive its right to challenge any provision or recommendation not specifically addressed in my rebuttal testimony.

EXHIBITS

STAFF'S RESPONSES TO
ARIZONA WATER COMPANY'S
FOURTH SET OF DATA REQUESTS
ACC DOCKET NO. W-01445A-02-0619

July 24, 2003

4.7 Please provide a copy of the NRRI publication *Cost Allocation and Rate design for Water Utilities* referred to on page 9 of John S. Thornton, Jr.'s testimony.

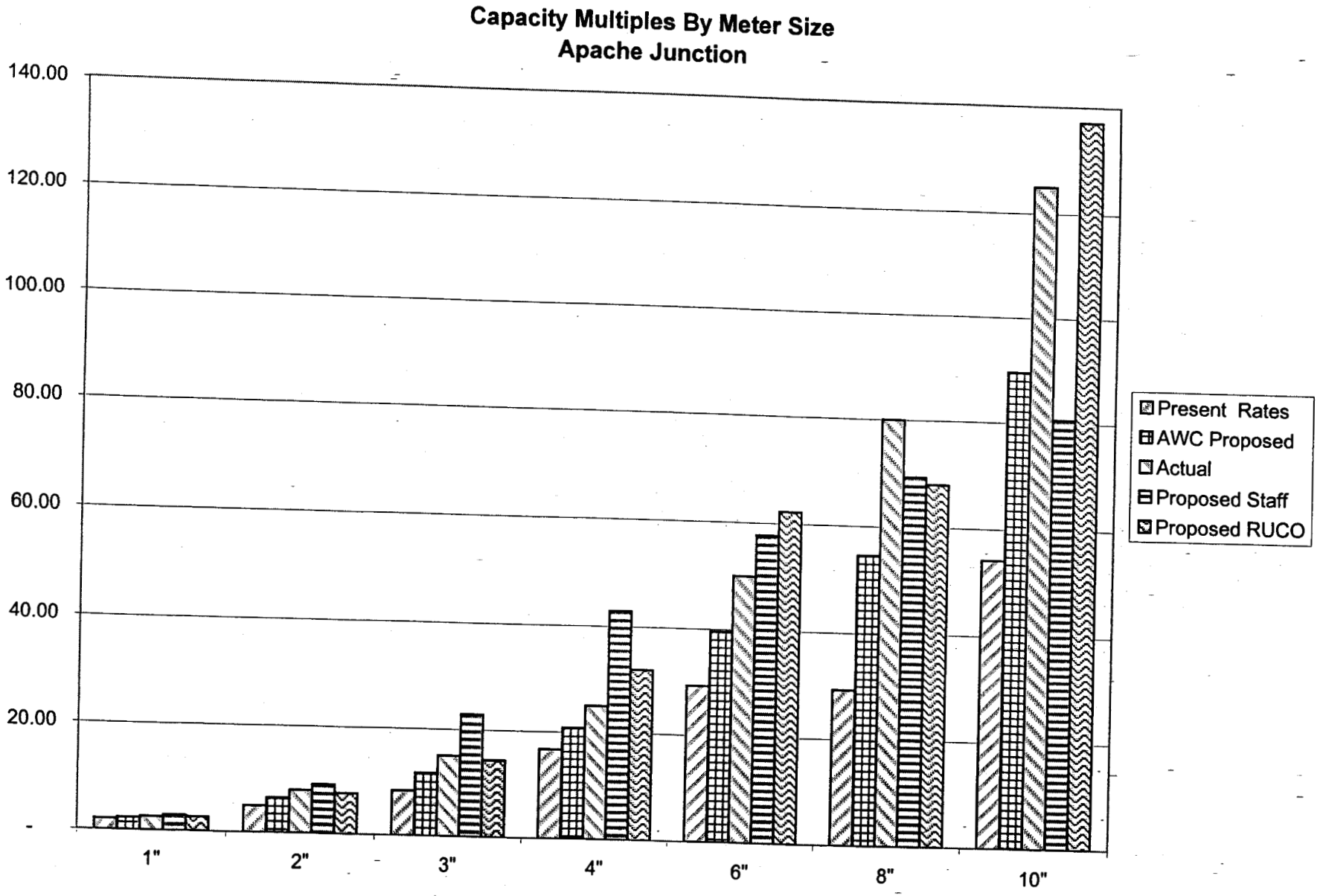
Response: Attached.

Response by: Ronald E. Ludders and Steven Olea for John S. Thornton, Jr.

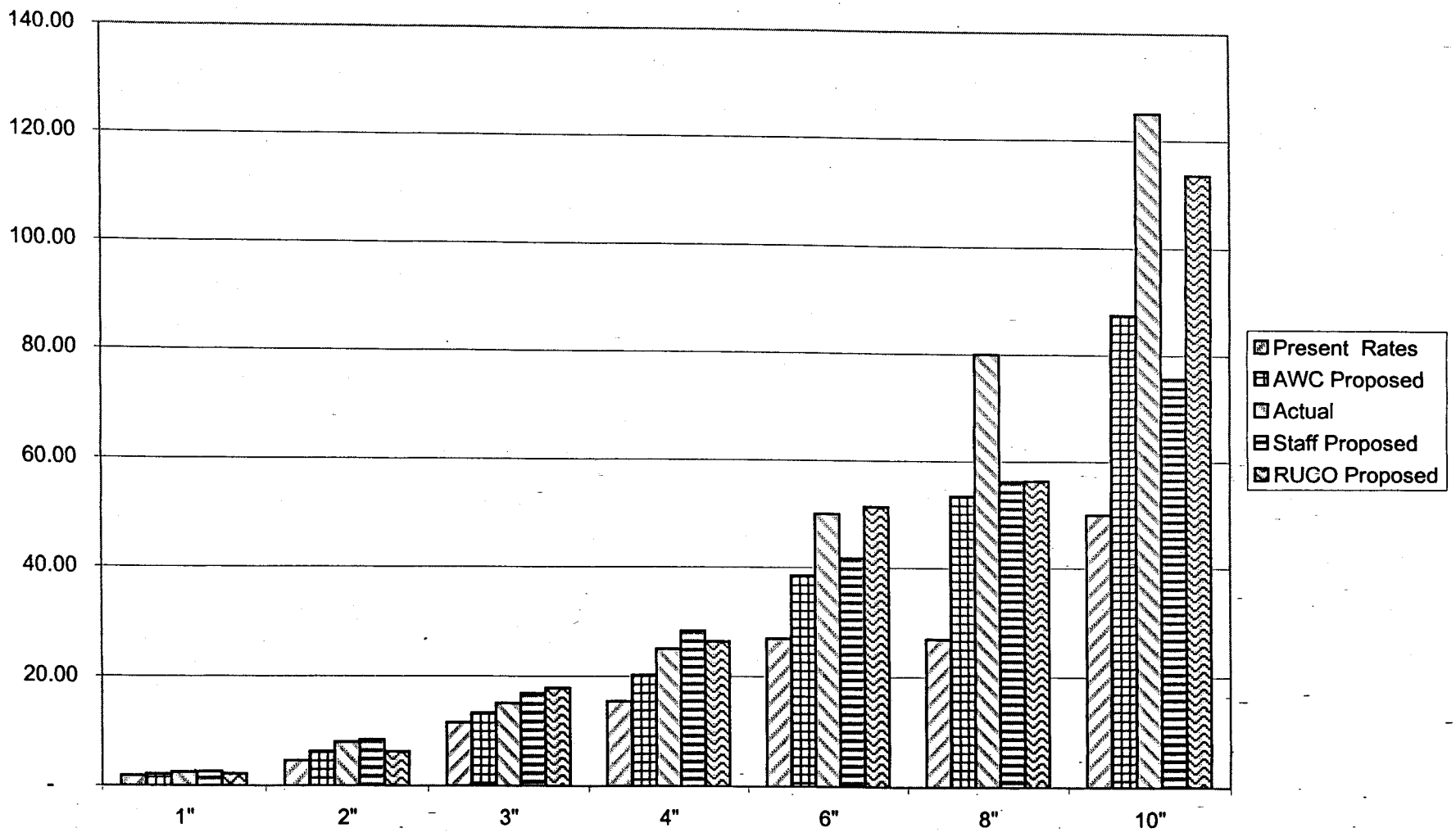
4.8 Please describe and identify by page, paragraph and line numbers the specific portions of the above NRRI publication that Staff relied on in designing rates for the Eastern Group systems. If the portions of the publication identified in the first part of this question were not applied equally to the rate design of all Eastern Group systems identify the systems that received differing treatment or weight and explain Staff's rationale.

Response: Staff relied on the entire publication, especially pages 63-103 and 118-119. The publication does not contain paragraph or line numbers.

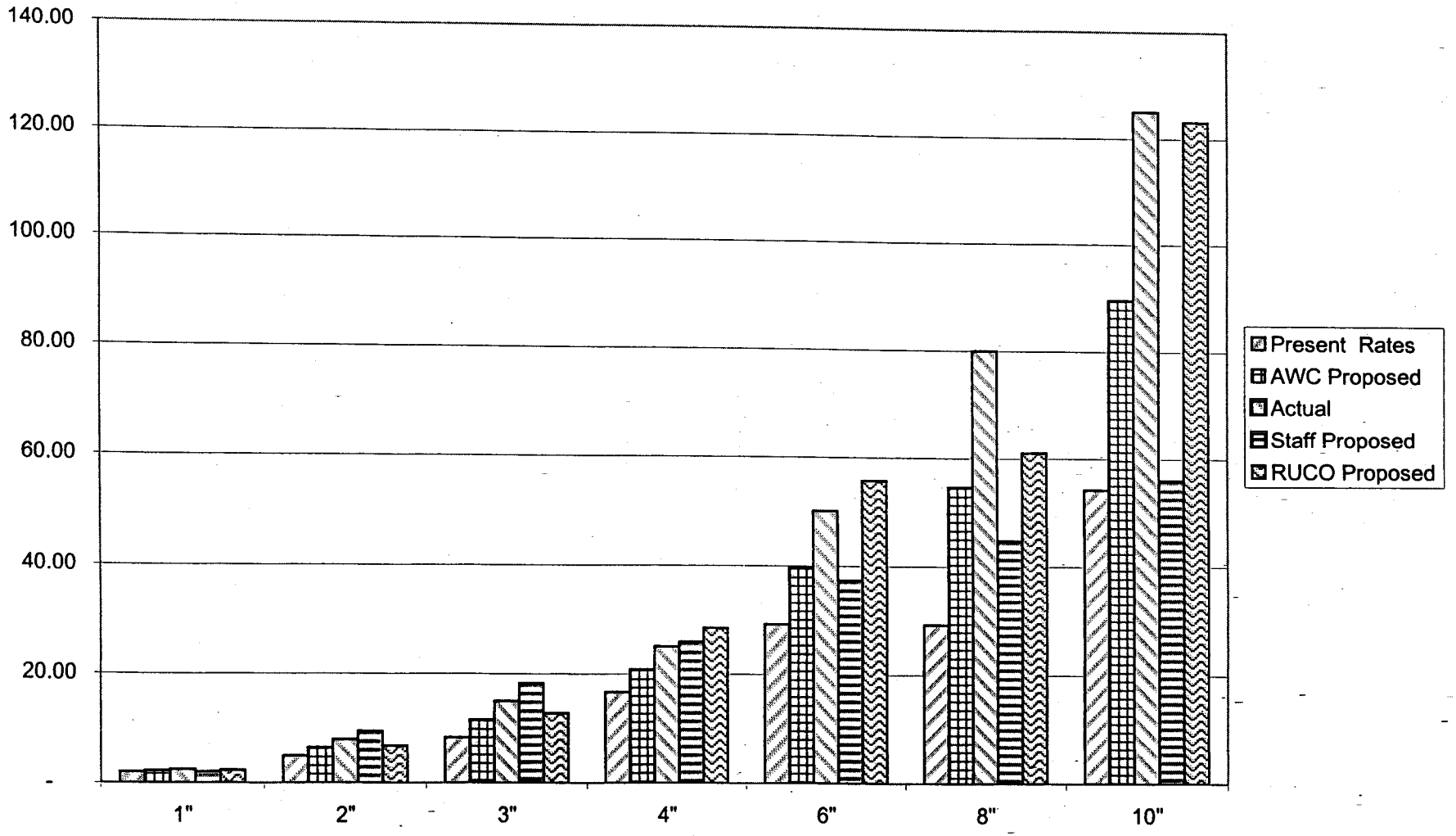
Response by: Claudio Fernandez and Steven Olea for John S. Thornton, Jr.


Capacity Multiples By Meter Size
Apache Junction
140.00
120.00
100.00
80.00
60.00
40.00
20.00
-
1"
2"
3"
4"
6"
8"
10"
Present Rates
AWC Proposed
Actual
Proposed Staff
Proposed RUCO

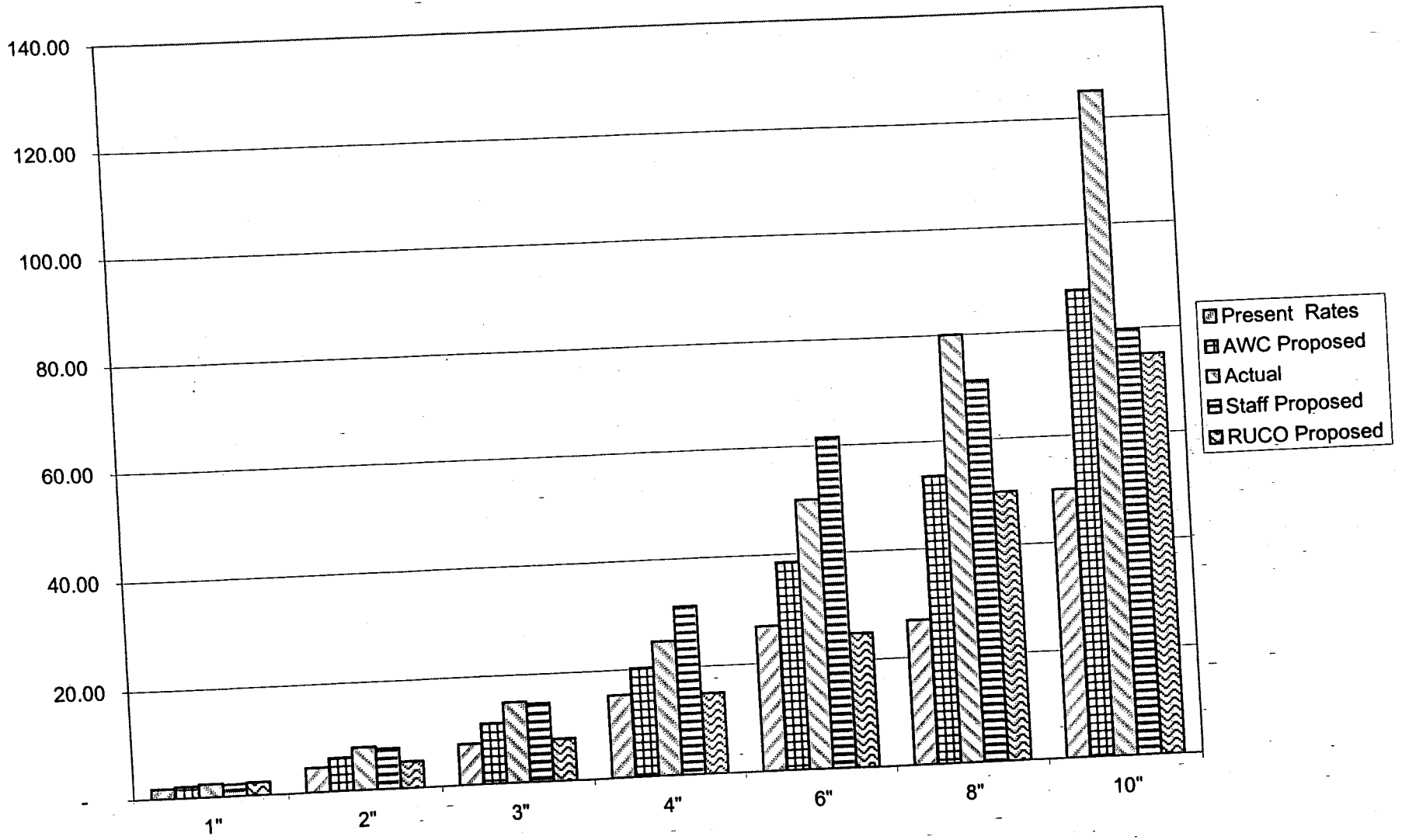
Capacity Multiples By Meter Size
Bisbee



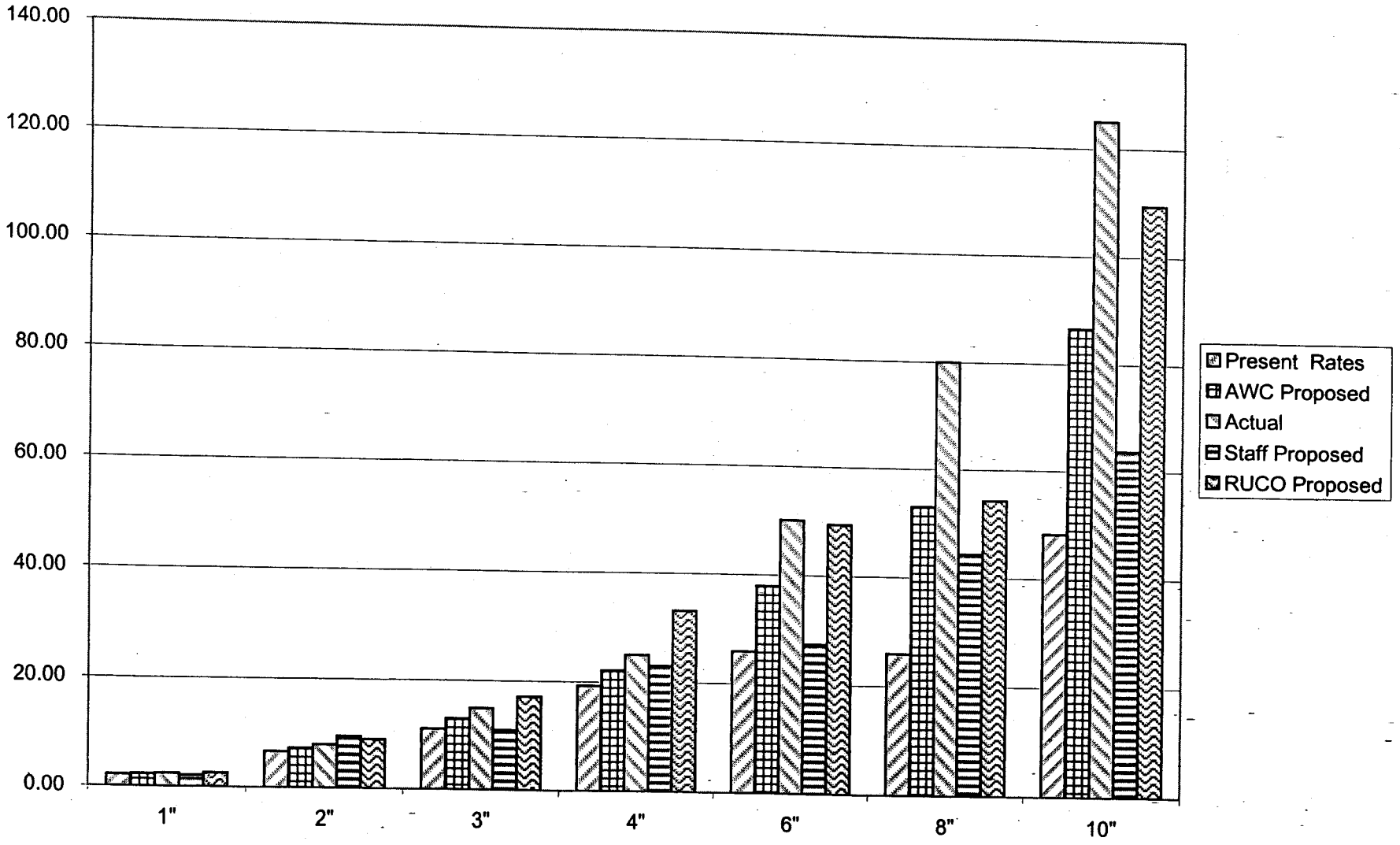
Capacity Multiples By Meter Size
Sierra Vista



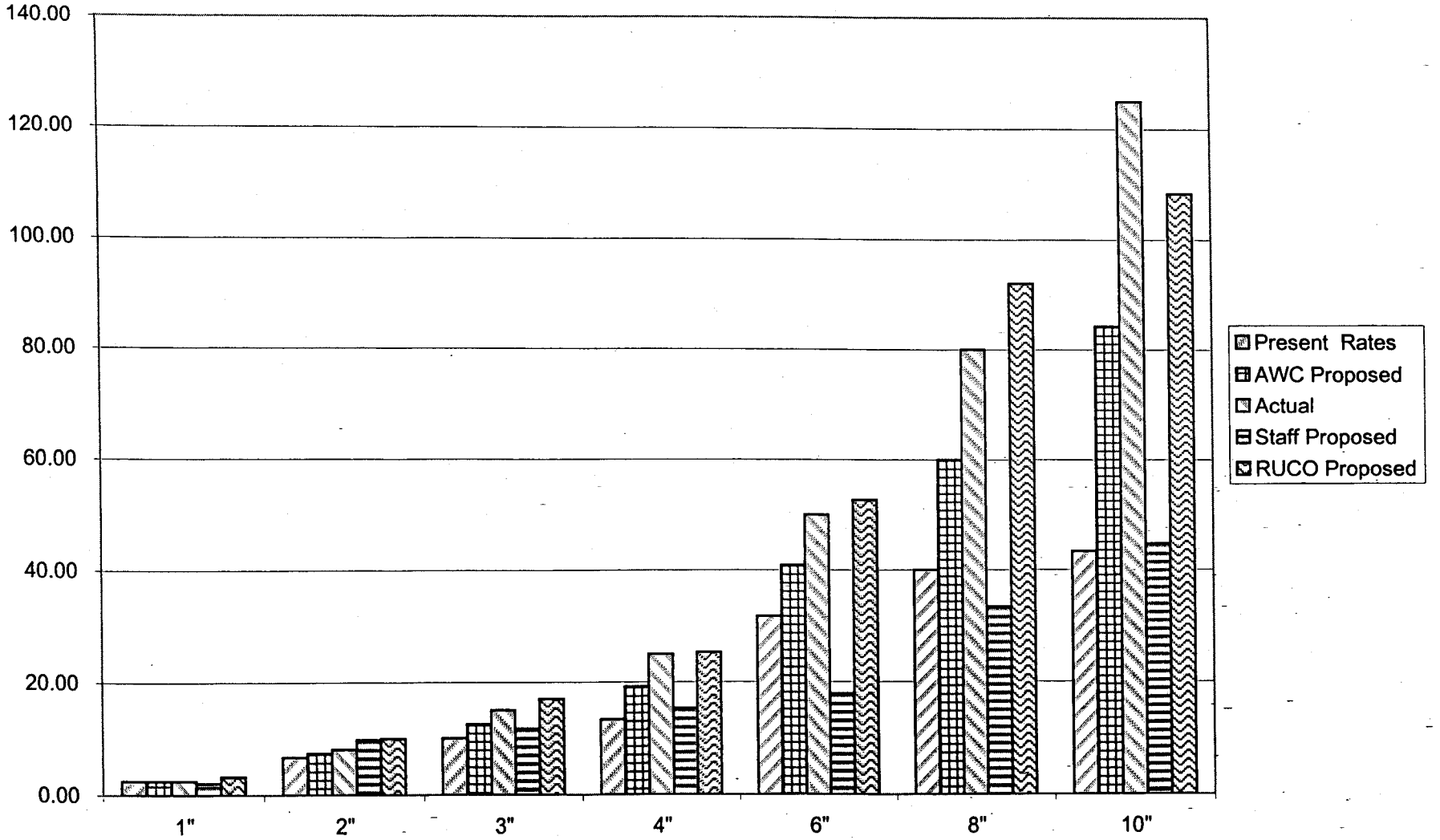
Capacity Multiples By Meter Size
Miami



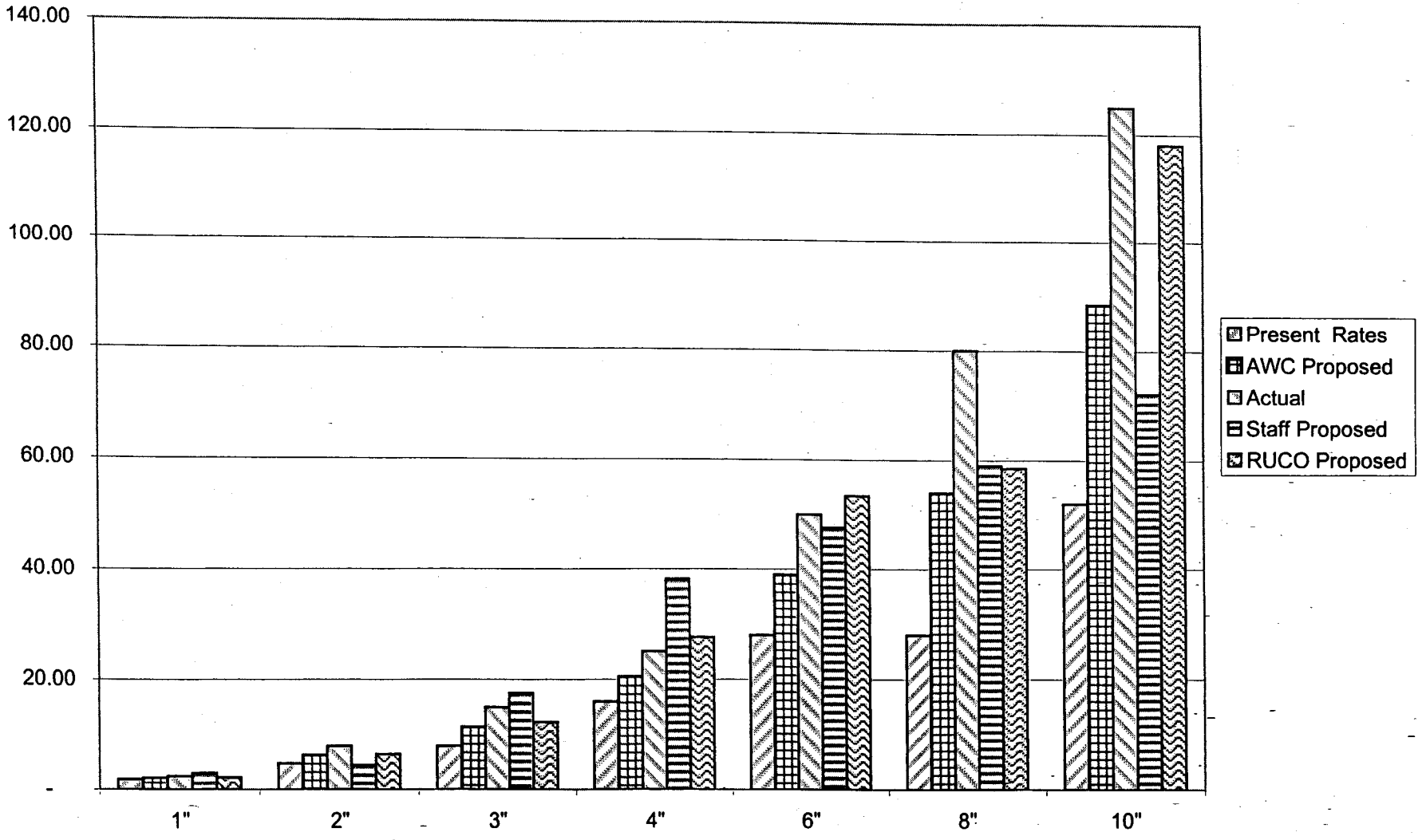
Capacity Multiples By Meter Size
San Manuel



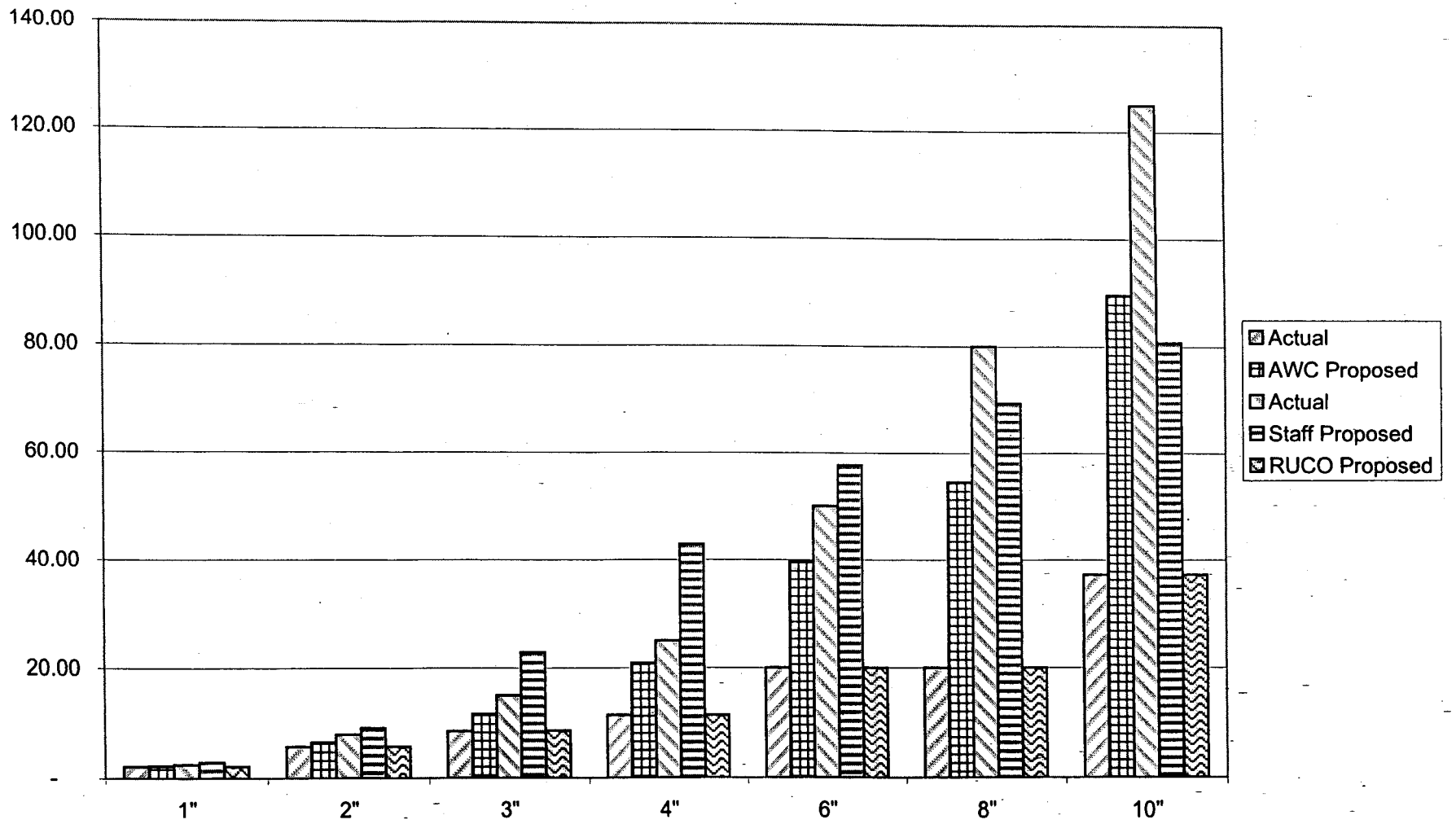
Capacity Multiples By Meter Size
Oracle



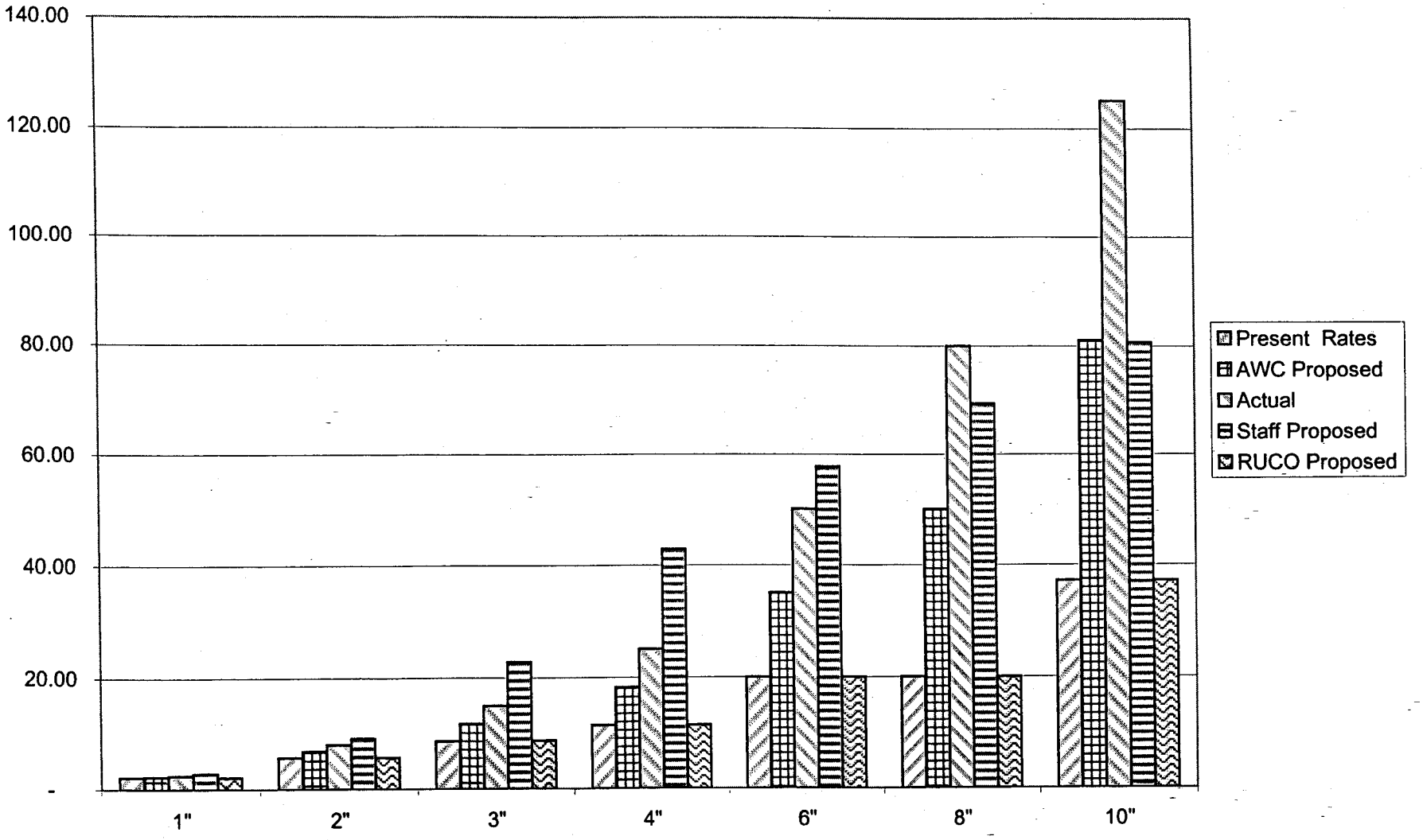
Capacity Multiples By Meter Size
Winkelman

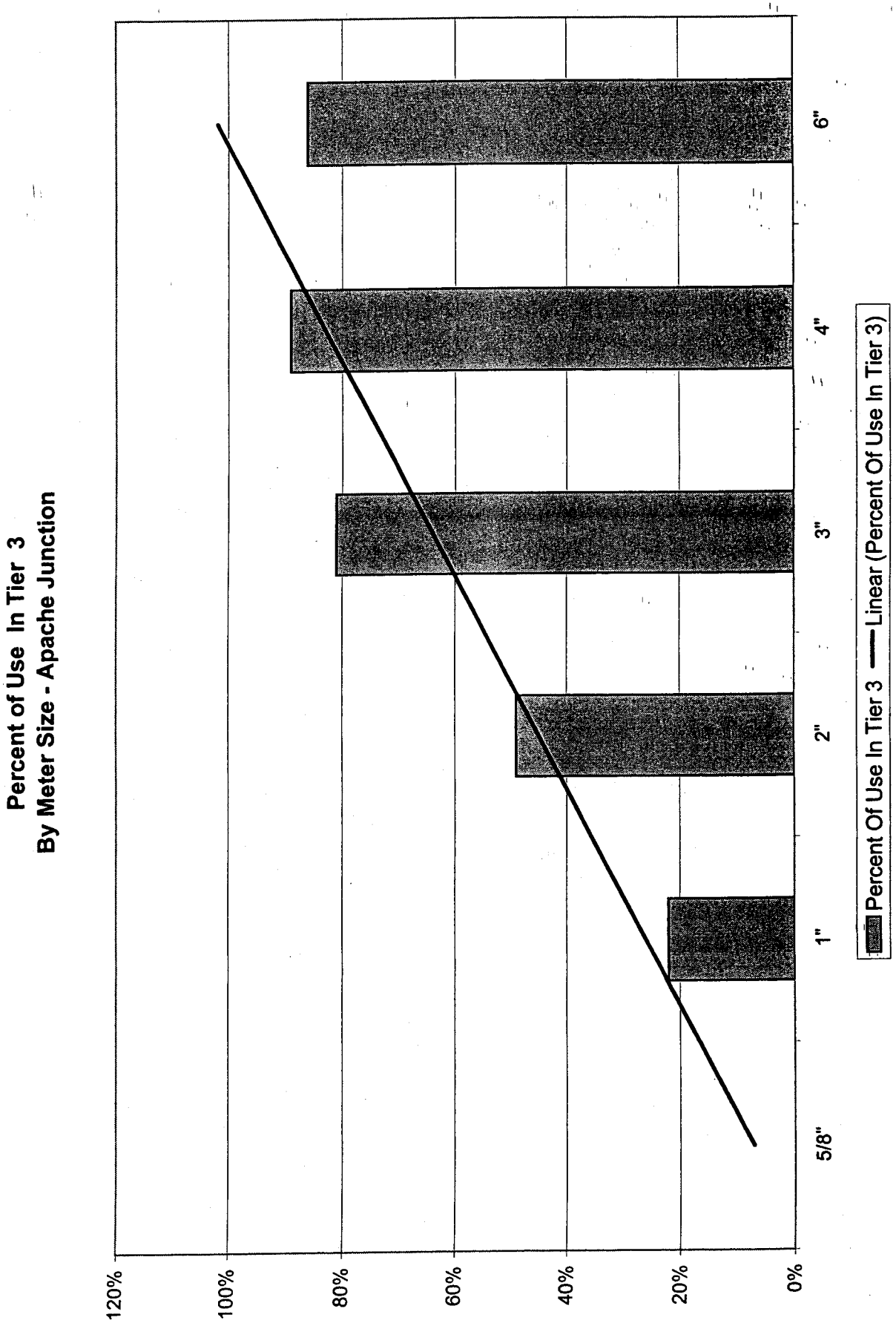


Capacity Multiples By Meter Size
Superior Combined W/ Apache Junction



Capacity Multiples By Meter Size
Superior Alone




Percent of Use In Tier 3
By Meter Size - Apache Junction
120%
100%
80%
60%
40%
20%
0%
5/8"
1"
2"
3"
4"
6"
Percent Of Use In Tier 3
Linear (Percent Of Use In Tier 3)